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1 Avalanche characteristics of substitution-permutation encryption networks

Heys, H.M.; Tavares, S.E.;

Computers, IEEE Transactions on , Volume: 44 , Issue: 9 , Sept. 1995

Pages:1131 - 1139

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IEEE JNL

2 Provable security of substitution-permutation encryption networks against linear cryptanalysis

Keliher, L.; Meijer, H.; Tavares, S.;

Electrical and Computer Engineering, 2000 Canadian Conference on , Volume: 1 , 7-10 March 20

Pages:37 - 42 vol.1

[\[Abstract\]](#)

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IEEE CNF

3 Construction of highly nonlinear injective S-boxes with application to CAST-like encryption algorithms

Youssef, A.M.; Chen, Z.G.; Tavares, S.E.;

Electrical and Computer Engineering, 1997. IEEE 1997 Canadian Conference on , Volume: 1 , 25-1997

Pages:330 - 333 vol.1

[\[Abstract\]](#)

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IEEE CNF

4 On the security of the CAST encryption algorithm

Heys, H.M.; Tavares, E.;

Electrical and Computer Engineering, 1994. Conference Proceedings. 1994 Canadian Conference on , 25-28 Sept. 1994

Pages:332 - 335 vol.1

[\[Abstract\]](#)

[\[PDF Full-Text \(260 KB\)\]](#)

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5 Transform domain analysis of DES

Guang Gong; Golomb, S.W.;

Information Theory, IEEE Transactions on , Volume: 45 , Issue: 6 , Sept. 1999

Pages:2065 - 2073

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IEEE JNL

6 Integrating the Data Encryption Standard into Computer Networks

Smid, M.;

Communications, IEEE Transactions on [legacy, pre - 1988] , Volume: 29 , Issue: 6 , Jun 1981

Pages:762 - 772

[Abstract] [PDF Full-Text (1136 KB)] IEEE JNL

7 A single-chip FPGA implementation of the data encryption standard (DES) algorithm

Wong, K.; Wark, M.; Dawson, E.;
Global Telecommunications Conference, 1998. GLOBECOM 98. The Bridge to Global Integration.
IEEE , Volume: 2 , 8-12 Nov. 1998
Pages:827 - 832 vol.2

[Abstract] [PDF Full-Text (304 KB)] IEEE CNF

8 Secure and fast encryption using chaotic Kolmogorov flows

Scharinger, J.;
Information Theory Workshop, 1998 , 22-26 June 1998
Pages:124 - 125

[Abstract] [PDF Full-Text (248 KB)] IEEE CNF

9 Large s-box design using a converging method

Hendessi, F.; Gulliver, T.A.; Sheikh, A.U.H.;
Information Theory. 1997. Proceedings., 1997 IEEE International Symposium on , 29 June-4 July
Pages:177

[Abstract] [PDF Full-Text (132 KB)] IEEE CNF

10 A method for obtaining cryptographically strong 8x8 S-boxes

Xun Yi; Shi Xin Cheng; Xiao Hu You; Kwok Yan Lam;
Global Telecommunications Conference, 1997. GLOBECOM '97., IEEE , Volume: 2 , 3-8 Nov. 1997
Pages:689 - 693 vol.2

[Abstract] [PDF Full-Text (472 KB)] IEEE CNF

11 Message authentication with one-way hash functions

Tsudik, G.;
INFOCOM '92. Eleventh Annual Joint Conference of the IEEE Computer and Communications Societies
IEEE , 4-8 May 1992
Pages:2055 - 2059 vol.3

[Abstract] [PDF Full-Text (364 KB)] IEEE CNF

12 Hardware implementation of 128-bit symmetric cipher SEED

Young-Ho Seo; Jong-Hyeon Kim; Dong-Wook Kim;
ASICs, 2000. AP-ASIC 2000. Proceedings of the Second IEEE Asia Pacific Conference on , 28-30
2000
Pages:183 - 186

[Abstract] [PDF Full-Text (316 KB)] IEEE CNF

13 Efficient 8-cycle DES implementation

Young Won Lim;
ASICs, 2000. AP-ASIC 2000. Proceedings of the Second IEEE Asia Pacific Conference on , 28-30
2000
Pages:175 - 178

[Abstract] [PDF Full-Text (352 KB)] IEEE CNF

14 A block cipher technique for security of data and computer networks

Rahouma, K.H.;
Internet Workshop, 1999. IWS 99 , 18-20 Feb. 1999
Pages:25 - 31

[Abstract] [PDF Full-Text (596 KB)] IEEE CNF

15 A new criterion for the design of 8x8 S-boxes in private-key ciphers

Jianhong Xu; Heys, H.M.;

Electrical and Computer Engineering, 1997. IEEE 1997 Canadian Conference on , Volume: 1 , 25-1997

Pages:322 - 325 vol.1

[\[Abstract\]](#) [\[PDF Full-Text \(316 KB\)\]](#) IEEE CNF

16 **The improved data encryption standard (DES) algorithm**

Seung-Jo Han; Heang-Soo Oh; Jongan Park;

Spread Spectrum Techniques and Applications Proceedings, 1996., IEEE 4th International Symposium , Volume: 3 , 22-25 Sept. 1996

Pages:1310 - 1314 vol.3

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¹ Towards practical "proven secure" authenticated key distribution

Yvo Desmedt, Mike Burmester

December 1993

Proceedings of the 1st ACM conference on Computer and communications security

Full text available: pdf (382.53 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citing](#), [index terms](#)

Secure key distribution is a critical component in secure communications. Finding 'proven secure' practical key distribution systems is one of the major goals in cryptography. The Diffie-Hellman variants, a family of key distribution systems, achieve some of the objectives of this goal. In particular, the 'non-paradoxical' system (by Matsumoto-Takahshima-Imai and Yacobi) is claimed to be secure against a known-key attack. In this paper we show that the argument used to prove this is ...

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¹ [On randomization in sequential and distributed algorithms](#)

Rajiv Gupta, Scott A. Smolka, Shaji Bhaskar

March 1994

ACM Computing Surveys (CSUR), Volume 26 Issue 1

 Full text available: [pdf \(8.01 MB\)](#)

 Additional Information: [full citation](#) [abstract](#) [references](#) [citing](#) [index terms](#)

Probabilistic, or randomized, algorithms are fast becoming as commonplace as conventional deterministic algorithms. This survey presents five techniques that have been widely used in the design of randomized algorithms. These techniques are illustrated using 12 randomized algorithms—both sequential and distributed—that span a wide range of applications, including: primality testing (a classical problem in number theory), interactive probabilistic proofs ...

Keywords: Byzantine agreement, CSP, analysis of algorithms, computational complexity, dining philosophers problem, distributed algorithms, graph isomorphism, hashing, interactive probabilistic proof systems, leader election, message routing, nearest-neighbors problem, perfect hashing, primality testing, probabilistic techniques, randomized or probabilistic algorithms, randomized quicksort, sequential algorithms, transitive tournaments, universal hashing

² [Simple constant-time consensus protocols in realistic failure models](#)

Benny Chor, Michael Merritt, David B. Shmoys

July 1989

Journal of the ACM (JACM), Volume 36 Issue 3

 Full text available: [pdf \(2.23 MB\)](#)

 Additional Information: [full citation](#) [abstract](#) [references](#) [citing](#) [index terms](#) [review](#)

Using simple protocols, it is shown how to achieve consensus in constant expected time, within a variety of fail-stop and omission failure models. Significantly, the strongest models considered are completely asynchronous. All of the results are based on distributively flipping a coin, which is usable by a significant majority of the processors. Finally, a nearly matching lower bound is also given for randomized protocols for consensus.

³ [A randomized protocol for signing contracts](#)

Shimon Even, Oded Goldreich, Abraham Lempel

June 1985

Communications of the ACM, Volume 28 Issue 6

 Full text available: [pdf \(1.23 MB\)](#)

 Additional Information: [full citation](#) [abstract](#) [references](#) [citing](#) [index terms](#) [review](#)

Randomized protocols for signing contracts, certified mail, and flipping a coin are presented. The protocols use a 1-out-of-2 oblivious transfer subprotocol which is axiomatically defined. The 1-out-of-2 oblivious transfer allows one party to transfer exactly one secret, out of two recognizable secrets, to his counterpart. The first (second) secret is received with probability one half, while the sender is ignorant of which secret has been received. An implementation of ...

⁴ [Cryptographic limitations on learning Boolean formulae and finite automata](#)

M. Kearns, L. G. Valiant

February 1989

Proceedings of the twenty-first annual ACM symposium on Theory of computing

 Full text available: [pdf \(1.32 MB\)](#)

 Additional Information: [full citation](#) [references](#) [citing](#) [index terms](#)
⁵ [Multi-prover interactive proofs: how to remove intractability](#)

Michael Ben-Or, Shafi Goldwasser, Joe Kilian, Avi Wigderson

January 1988

Proceedings of the twentieth annual ACM symposium on Theory of computing

Full text available:  pdf1.90.MBAdditional information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Quite complex cryptographic machinery has been developed based on the assumption that one-way functions exist, yet we know of only a few possible such candidates. It is important at this time to find alternative foundations to the design of secure cryptography. We introduce a new model of generalized interactive proofs as a step in this direction. We prove that all NP languages have perfect zero-knowledge proof-systems in this model, without making any intractability assumptions.

6 Proofs that yield nothing but their validity or all languages in NP have zero-knowledge proof systems

Oded Goldreich, Silvio Micali, Avi Wigderson
July 1991 **Journal of the ACM (JACM)**, Volume 38 Issue 3

Full text available:  pdf13.04.MBAdditional information: [full citation](#), [references](#), [citations](#), [index terms](#)

Keywords: NP, cryptographic protocols, fault tolerant distributed computing, graph isomorphism, interactive proofs, methodological design of protocols, one-way functions, proof systems, zero-knowledge

7 Simple constant-time consensus protocols in realistic failure models (extended abstract)

Benny Chor, Michael Merritt, David B. Shmoys
August 1985

Proceedings of the fourth annual ACM symposium on Principles of distributed computing

Full text available:  pdf11.05.MBAdditional information: [full citation](#), [references](#), [citations](#), [index terms](#)

8 Computational learning theory: survey and selected bibliography

Dana Angluin
July 1992

Proceedings of the twenty-fourth annual ACM symposium on Theory of computing

Full text available:  pdf12.11.MBAdditional information: [full citation](#), [references](#), [citations](#), [index terms](#), [review](#)

9 Cryptographic limitations on learning Boolean formulae and finite automata

Michael Kearns, Leslie Valiant
January 1994

Journal of the ACM (JACM), Volume 41 Issue 1

Full text available:  pdf12.20.MBAdditional information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In this paper, we prove the intractability of learning several classes of Boolean functions in the distribution-free model (also called the Probably Approximately Correct or PAC model) of learning from examples. These results are representation independent, in that they hold regardless of the syntactic form in which the learner chooses to represent its hypotheses. Our methods reduce the problems of cracking a number of well-known public-key cryptosystems to the I ...

10 Software protection and simulation on oblivious RAMs

Oded Goldreich, Rafail Ostrovsky
May 1996

Journal of the ACM (JACM), Volume 43 Issue 3

Full text available:  pdf13.44.MBAdditional information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Software protection is one of the most important issues concerning computer practice. There exist many heuristics and ad-hoc methods for protection, but the problem as a whole has not received the theoretical treatment it deserves. In this paper, we provide theoretical treatment of software protection. We reduce the problem of software protection to the problem of efficient simulation on oblivious RAM. A machine is oblivious if the sequence in which it ...

Keywords: pseudorandom functions, simulation of random access machines, software protection

11 Design of practical and provably good random number generators

William Aiello, Sivaramakrishnan Rajagopalan, Ramarathnam Venkatesan
January 1995

Proceedings of the sixth annual ACM-SIAM symposium on Discrete algorithms

Full text available:  pdf11.01.MBAdditional information: [full citation](#), [references](#), [citations](#), [index terms](#)

12 Toward a secure system engineering methodology

Chris Salter, O. Sami Saydjari, Bruce Schneier, Jim Wallner
January 1998

Proceedings of the 1998 workshop on New security paradigms

Full text available:  pdf(958.98 KB)Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)**13 Oblivious transfer and polynomial evaluation**

Moni Naor, Benny Pinkas

May 1999

Proceedings of the thirty-first annual ACM symposium on Theory of computingFull text available:  pdf(956.48 KB)Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)**14 Algorithms on Stings, Trees, and Sequences: Computer Science and Computational Biology**

Dan Gusfield

December 1997

ACM SIGACT News, Volume 28 Issue 4Full text available:  pdf(1.20 MB)Additional Information: [full citation](#)**15 The discrete log is very discreet**

A. W. Schrifft, A. Shamir

April 1990

Proceedings of the twenty-second annual ACM symposium on Theory of computingFull text available:  pdf(957.88 KB)Additional Information: [full citation](#), [citations](#), [index terms](#)**16 Optimal algorithms for Byzantine agreement**

Paul Feldman, Silvio Micali

January 1988

Proceedings of the twentieth annual ACM symposium on Theory of computingFull text available:  pdf(1.72 MB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

We exhibit randomized Byzantine agreement (BA) algorithms achieving optimal running time and fault tolerance against all types of adversaries ever considered in the literature. Our BA algorithms do not require trusted parties, preprocessing, or non-constructive arguments. Given private communication lines, we show that n processors can reach BA in expected constant time in a synchronous network if any

<

17 Testing problems with sub-learning sample complexity

Michael Kearns, Dana Ron

July 1998

Proceedings of the eleventh annual conference on Computational learning theoryFull text available:  pdf(1.69 MB)Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)**18 $P = BPP$ if E requires exponential circuits: derandomizing the XOR lemma**

Russell Impagliazzo, Avi Wigderson

May 1997

Proceedings of the twenty-ninth annual ACM symposium on Theory of computingFull text available:  pdf(1.18 MB)Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)**19 Public-key cryptography and password protocols**

Shai Halevi, Hugo Krawczyk

August 1999

ACM Transactions on Information and System Security (TISSEC), Volume 2 Issue 3Full text available:  pdf(1275.84 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

We study protocols for strong authentication and key exchange in asymmetric scenarios where the authentication server possesses a pair of private and public keys while the client has only a weak human-memorizable password as its authentication key. We present and analyze several simple password authentication protocols in this scenario, and show that the security of these protocols can be formally proven based on standard cryptographic assumptions. Remarkably, our analysis shows optimal re ...

Keywords: dictionary attacks, hand-held certificates, key exchange, passwords, public passwords, public-key protocols

20 Public-key cryptography and password protocols

Shai Halevi, Hugo Krawczyk

November 1998

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"DES" "key expansion" "same" (substitution OR "s-box" OR "s-boxes")

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